

REMARKS / ARGUMENTS

The action by the Examiner in this application, together with the references cited, has been given careful consideration. Following such consideration, claims 1-14 have been amended. It is respectfully requested that the Examiner reconsider the claims in their present form, together with the following comments, and allow the application.

The Examiner rejected claims 1, 2 and 13 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Appropriate corrections have been made by amendment. Accordingly, it is respectfully requested that the Examiner now withdraw the 35 U.S.C. 112, second paragraph rejection.

As the Examiner well knows, the present invention relates to a chemical delivery device for holding powdered reagents that interact with water to form an anti-microbial fluid for use in an apparatus for cleaning and microbially deactivating items. The device includes a container and a plurality of spaced-apart barrier elements. The container has a fluid inlet that connects to a source of water and an outlet that is in fluid communication with the items to be microbially deactivated. The container defines a fluid passage from the fluid inlet to the fluid outlet. Disposed within the passage are pluralities of spaced-apart barriers that separate the container into several isolated compartments that hold chemical reagents in powdered form. The barriers are impervious to the powdered reagents that are disposed within the isolated compartments, but permeable to chemical reagents when mixed with water and in liquid form.

In a preferred embodiment, the fluid inlet of the container connects to a male fitting in the apparatus. The male fitting includes an o-ring that enables a fluid-tight connection between the

apparatus and the chemical delivery device. A plate having a plurality of spaced-apart apertures is disposed above the upper compartment. The plate, designated "262," is best seen in FIG. 3. The apertures in the plate define separate fluid streams for fluid entering the chamber containing the reagents. As seen in FIG. 3, the total area of the apertures is less than the cross-sectional area of inlet 224. Thus, the streams of water entering the chamber are like "jets" of water. Each stream helps dissolve the reagent within the compartments.

In this respect, the process of microbially decontaminating a contaminated device requires that the dry reagents dissolve properly to create the microbial decontamination fluid for the decontamination phase of the cycle. In some circumstances, the mere flowing of water into the compartments where the reagents are located may result in less than adequate dissolution of the reagents. The optimal conditions for dissolution, especially of the buffers, inhibitors and wetting components, in the upper compartment is for the incoming water to impinge upon the reagents with sufficient fluid pressure to break apart any lumps of dry reagents that may exist. Insufficient fluid pressure may result in the reagents "lumping" together and not dissolving at the proper rate. In addition, a single large stream of fluid produces a "tunneling" effect through the dry reagent.

The structure in the present invention is designed to create a plurality of distinct streams, i.e., "jets," of fluid to impact the reagent located in the upper compartment. In this respect, fluid that flows from the fluid inlet to the upper compartment, must pass through the plurality of spaced-apart apertures in the support plate. A plurality of separate streams, i.e., jets, of fluid are created by the plate and by the plurality of spaced-apart apertures formed therein. These jets of

fluid impact the reagent in the upper compartment and aids in the proper dissolution of the reagent.

In response to the Examiner's rejections, the claims have been amended to define more clearly the patentable invention Applicants believe is disclosed herein. Specifically, claims 1 and 14 have been amended to define a chemical delivery device having a "plate disposed above said first, dry powdered reagent." The plate has "a plurality of spaced-apart apertures formed therethrough."

The Examiner rejected claims 1, 6, 10, 11 and 13 under 35 U.S.C. 102 as being anticipated by Fricker et al. (U.S. Patent No. 6,325,968).

The '968 patent discloses a cylindrical container for holding powdered reagents that interact with water to form an anti-microbial fluid. The container includes a rigid container 16 having a fluid inlet connectable to a source of water and a fluid outlet in fluid communication with items to be microbially deactivated. A plurality of spaced-apart barrier elements 70, 58 are disposed within the container. The elements together define two isolated compartments within the container 16. The compartments each contain a reagent, such as acetylsalicylic acid, which reacts with water to form an antimicrobial. However, the '968 patent does not teach, suggest, or show a structure with a plate that has "a plurality of spaced-apart apertures" to define a plurality of separate streams, i.e., fluid inlets, into the upper compartment.

The Examiner rejected claims 1, 2, and 6-14 under 35 U.S.C. 103(a) as being unpatentable over Fricker et al. (U.S. Patent No. 6,325,968) in view of Livingston et al. (U.S. Patent No. 5,759,501), claim 3 further in view of Siegel et al. (U.S. Patent No. 5,662,866) and claims 4 and 5 further in view of Davis (U.S. Patent No. 6,158,580).

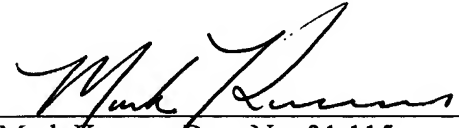
It is respectfully submitted that none of the cited references, alone or together, teaches, suggests or shows the claims in their present form. The combination of the '968 patent and the either the '501, '866 or '580 patents do not teach, suggest or show the structure set forth in claims 1 or 14, wherein the chemical delivery device has a plate located above the dry reagent with a plurality of spaced-apart apertures that have a plurality of separate apertures to provide separate streams of fluid into the compartment to help dissolve the reagents therein.

For the foregoing reasons, it is respectfully submitted that the claims in their present form are distinguishable from the cited references, and favorable action is therefore respectfully requested.

Respectfully submitted,

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I hereby certify that this correspondence (along with any paper referenced as being attached or enclosed) is being deposited on the below date with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to MAIL STOP AMENDMENT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date: April 18, 2006


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